STI International Inc.

STI Sporting Rifle

Operating & Safety Instruction Manual

For both Tactical and Competition Models

SR09A.1 .PDF Version

WARNING:

IF THIS FIREARM IS CARELESSLY OR IMPROPERLY HANDLED, UNINTENTIONAL DISCHARGE COULD RESULT AND COULD CAUSE INJURY, DEATH, OR DAMAGE TO PROPERTY.

CAUTION:

CAREFULLY READ THIS INSTRUCTION MANUAL PRIOR TO LOADING AND FIRING THIS FIREARM. FOLLOW ALL INSTRUCTIONS ON THE PROPER HANDLING AND SAFE USE OF THIS FIREARM – LIVES MAY DEPEND ON IT! If unfamiliar with firearms, seek further advise through safe handling courses run by your local gun clubs, NRA approved instructor, or similar qualified organizations.

CAUTION:

USE ONLY CLEAN, DRY, HIGH QUALITY COMMERCIALLY MANUFACTURED AMMUNITION IN GOOD CONDITION WHICH IS APPROPRIATE TO THE 5.56/.223 Remington Caliber of your firearm. We do not recommend the use of remanufactured or hand loaded ammunition because it may damage your rifle. Use of improper ammunition will invalidate your warranty.

WARNING:

THIS WEAPON COULD CHAMBER A ROUND if it is dropped or jarred with a loaded magazine in place – either with the bolt carrier assembly locked to the rear, or in its forward position.

ALWAYS PRACTICE SAFE FIREARMS HANDLING!

FUNDAMENTAL RULES FOR SAFE GUN HANDLING:

1) ***ALWAYS*** KEEP THE GUN POINTED IN A SAFE DIRECTION.

2) ***ALWAYS*** KEEP YOUR FINGER OFF THE TRIGGER UNTIL READY TO SHOOT.

3) ***NEVER*** LOAD THE GUN UNTIL READY TO USE.

WARNING: BEWARE OF DANGEROUS PROCEDURES

- Be sure cam pin is correctly installed in the bolt group. If it is not, your rifle can still fire and may explode.

- If your rifle stops firing with a live round in the chamber of a hot barrel (a misfire), remove the round fast. However, if you cannot remove it within 10 seconds, remove the magazine and wait 15 minutes with the rifle pointing in a safe direction. This way you won't get hurt by the possible round "cooking-off" (i.e. the round detonating just from the heat of the barrel). In any event, keep your face away from the ejection port while clearing a hot chamber.

- If your bolt fails to unlock and you try to free it by banging the butt-stock on the ground, keep yourself clear of the muzzle and keep the Rifle pointed in a safe direction.

- If there is water in the barrel, do NOT fire the rifle. It could explode.

- If a noticeable difference in sound or recoil is experienced, STOP FIRING. Either condition could indicate an incomplete powder burn and/or a bullet stuck in the bore.

TABLE OF CONTENTS

Basic Rifle Parts Overview 6

Clearing Your Rifle 7-8

Disassembling Your Rifle 9-12

Cleaning/Inspection/Lubrication 13

Cleaning the Upper Receiver 13

Cleaning the Lower Receiver 14

Cleaning the Ejector 14

Lubrication (Upper Receiver) 15

Lubrication (Lower Receiver) 15

Lubrication (Bolt Carrier Group) 15

Reassembly 16-19

Safety Function Check 20

Operation of Your Rifle 21-22

Immediate Action in Case of Trouble 22-23

Disassembly View..... 24

WARNING:

BEFORE USING THIS FIREARM, READ & FOLLOW THESE INSTRUCTIONS. If there is *ANYTHING* you do not understand, get help from someone qualified in the safe handling of firearms.

FACTS ABOUT YOUR STI SPORTING RIFLE

The STI SPORTING RIFLE system consists of a rifle and a magazine. It is a lightweight, gas operated, air cooled, magazine-fed, shoulder-fired weapon that can be fired in a semi-automatic mode – i.e., a single shot each time the trigger is pulled.

- The upper and lower receivers are easily opened for cleaning and inspection.

- The bolt group and barrel extension are designed with locking lugs that lock the bolt group to the barrel extension.

- The forged aluminum upper and lower receivers reduce the overall weight of the rifle.

- Caliber: .223 Remington/5.56mm

- Weight: Competition: 6 lbs 10 oz
  Tactical: 6 lbs 7.8 oz

- Length: 36”

- Barrel Rifling: R.H. twist; 1 in 8”, 6 lands & grooves

Basic Parts Overview

Clearing Your Rifle pt I

Make sure to point rifle in a SAFE DIRECTION!

1) Place Safety Selector Lever on SAFE.

Tip: *If the rifle is not cocked the Selector Lever cannot be pointed toward SAFE*

2) Press Magazine Catch Button with trigger finger and with the other hand pull Magazine straight down to remove from rifle.

3) To lock Bolt open, pull the Charging Handle rearward. Press the bottom of the Bolt Catch & allow Bolt to move forward until it engages Bolt Catch. Return Charging Handle to forward postion. If you haven't already done so, place the Safety Selector Lever on SAFE.

Clearing Your Rifle pt II

4) Check both Receiver and Chamber to ensure there is no ammuntion in the Rifle.

5) With Selector Lever pointed towards SAFE, allow Bolt to go forward by depressing the upper portion of the Bolt Catch.

Disassembling Your Rifle pt I

Tip: *Clear Rifle and Disconnect the Sling before proceeding.*

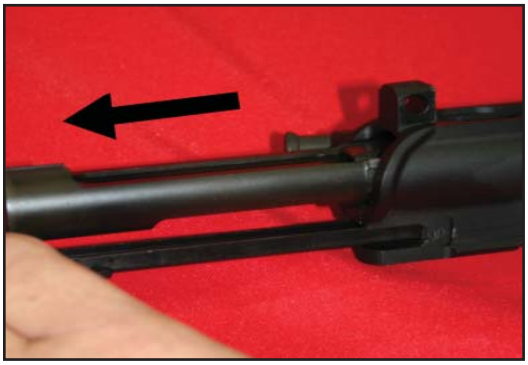
1) Using a punch or small screwdriver, push in Takedown Pin as far as it will go. Pivot Upper Receiver away from Lower Receiver.

2) Using a punch or small screwdriver, push in Front Pivot Pin.

Tip: *Although you CAN push the pin all the way out, it is easier to leave it in just a little.*

3) Separate the Upper & Lower Receivers.

Disassembling Your Rifle pt II



4) Pull back Charging Handle & Bolt Carrier

5) Remove Bolt Carrier & Bolt

6) Remove Firing Pin Retaining Pin

Tip: *Do NOT open or close the split end of the pin*

7) Push Bolt into locked position and drop Firing Pin out rear of Bolt Carrier.

Disassembling Your Rifle pt III

8) Remove Bolt Cam Pin

Tip: *Give Cam Pin a 1/4 turn and lift out*

9) Remove Bolt Assembly from Carrier

10) Remove Extractor Pin by pushing out with a punch

Tip: *Press Rear of Extractor to check Spring function*

Disassembling Your Rifle pt IV

12) Remove Extractor & Spring

Caution:
If care is not taken to prevent it, the Extractor Spring may pop out and be lost

13) Press in Buffer, depress Retainer, and release Buffer

14) Remove Buffer and Action Spring

STI does NOT recommend any further disassembly

Cleaning, Inspection, & Lubrication

- After firing, clean your rifle as soon as possible to both make the job easier and to avoid allowing corrosion to develop.
- If your firearm has *not* been fired, you should still clean it at least once or twice a year if you live in a temperate climate, or as often as once a week in a tropical climate.
- If you get your firearm wet, clean it as soon as possible.
- Use a high quality rifle cleaning kit that includes a cleaning rod; swab holder; cotton flannel bore patches; pipe cleaners; a small toothbrush; brass wire bristle bore and chamber brushes; and a Cleaner/Lubricant/Preservative.
- After you have disassembled the rifle, thoroughly clean, inspect and lubricate all parts according to the techniques described on following pages.

Cleaning the Upper Receiver

Caution: Check to ensure that there is no looseness between the Barrel and the Upper Receiver. If you detect any movement by twisting with your hands, the Barrel Nut must be retorqued; take your rifle to a qualified gunsmith.

1) Using a good quality gun oil, clean all areas of powder fouling, corrosion, dirt, and rust. Never use a wire brush or any type of abrasive to clean the aluminum Upper Receiver as it might adversely affect the finish.

2) Clean the Firing Chamber – dip the larger chamber cleaning brush in oil and use at least five plunge strokes and three 360º clockwise rotations. Then swab out the bore to remove any contaminated solution or loosened crud.

3) Use the bore cleaning brush, still wet with oil, and clean carbon and powder residue from around the Gas Tube, run a pipe cleaner into the Gas Tube, clean the Bolt locking lugs, Bolt rings, Firing Pin, Bold Cam Pin, lip of the Extractor, and inside the Bolt Carrier from both front and rear.

4) Wipe all components clean and dry, and inspect for excessive wear, corrosion or mechanical damage. Replace any defective parts before firing again.

Cleaning the Lower Receiver

1) Clean all areas of powder fouling, corrosion, dirt and rust. Never use a wire brush or any type of abrasive to clean the aluminum Lower Receiver as it might adversely affect the finish.

2) Wipe any dirt from the Trigger Mechanism, the Buffer, Action Spring, and inside the Lower Receiver Extension (the Buffer Tube).

Cleaning the Ejector

The design of the Ejector makes its disassembly for cleaning somewhat impractical (i.e. STI doesn't recommend it). Make sure your STI Sporting Rifle ejects empty cases efficiently by following these three steps on a monthly basis (more frequently if firing blanks).

1) Remove the Bolt from the Carrier. Hold it as shown in Illustration 1 *(below)* with the Ejector down and the Extractor up.

2) Dribble a few drops of oil around the Ejector to form a puddle.

3) Take a fired or dummy case and place it under the lip of the Extractor as shown in Illustration 2 *(below)*. With a rocking motion, press the case down against the Ejector. Since the Ejector is spring loaded, some resistance will be felt. Press on the case until it stops against the Bolt Face. Ease off with your thumb slightly and press down again. Repeat several times. Replace the oil frequently. Once the spring action of the Ejector is smooth and strong, dry off any excess.

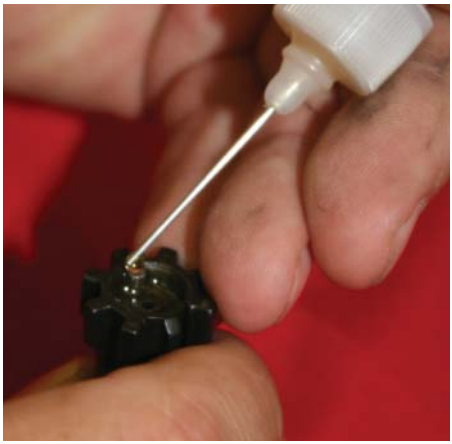


Illustration 1

Illustration 2

Lubrication

UPPER RECEIVER-

Lightly lubricate the inside of the Upper Receiver, the Bore and Chamber with a high quality gun oil. Be sure to lube in and around all the Locking Lugs.

LOWER RECEIVER-

Lightly lubricate the inside of the Lower Receiver Extension (Buffer Tube), the Buffer, the Action Spring, and contact surfaces of the Fire Control with a high quality gun oil.

BOLT CARRIER GROUP-

Lightly lubricate the Firing Pin with oil – also the Firing Pin Recess in the Bolt.

Generously lubricate the Bolt, its Cam Pin area, the Bolt Gas Rings. A lighter application is good on the Extractor and its pin.

Lightly lubricate the Charging Handle and the inner and outer surfaces of the Bolt Carrier.

Generously lubricate the Slide and Cam Pin area of the Bolt Carrier.

The inside of the Carrier Key on the Bolt Carrier should be dried with a pipe cleaner – then place one drop of gun oil inside.

Reassembly pt I

1) Insert action spring and buffer. Depress buffer detent and push buffer in past the detent, then release.

2) Insert Extractor and Spring

3) Push in Extractor Pin

4) Slide Bolt into Carrier

Reassembly pt II

<u>WARNING:</u> Be sure the Cam Pin is installed in the bolt group. If it is not, your rifle *can* still fire and may explode.

<u>NOTE:</u> The Bolt is machined so as to allow insertion of the Cam Pin from one side only. This provision aligns the Extractor and Ejector properly within the Upper Receiver.

5) Replace Bolt Cam Pin

Tip: *Give Cam Pin a 1/4 turn after insertion*

6) Drop in and seat the Firing Pin

Reassembly pt III

7) Pull Bolt Out

8) Replace Firing Pin Retaining Pin

Tip: *Firing Pin should NOT fall out when Bolt Carrier Group is turned upside down*

9) Engage, then push Charging Handle part way

10) Position Carrier Key in slotted bottom of Charging Handle. Slide in Bolt Carrier Group. Push Charging Handle and Bolt Carrier into Receiver together.

Reassembly pt IV

11) Join Upper & Lower Receivers and engage the Receiver Pivot Pin

CAUTION:
Selector Lever should be on SAFE before closing Upper Receiver

12) Close the Upper & Lower Receiver groups and push in the Takedown Pin

This completes the reassembly process

Safety Function Check

1) Remove Magazine (if installed.) Pull Charging Handle Assembly to rear. Check that Chamber is clear. Let Bolt and Bolt Carrier close. Do **not** pull Trigger. Leave hammer in cocked position.

WARNING:
If rifle fails any of the following tests, continued use of the rifle could result in injury to, or death of, personnel. Discontinue use immediately and take your rifle to a qualified gunsmith.

2) Place Selector Lever in *SAFE* position and pull Trigger. THE HAMMER SHOULD NOT FALL.

3) Place Selector Lever in *FIRE* position. Pull trigger. THE HAMMER SHOULD FALL.

NOTE:
For the purpose of the following check, "SLOW" is defined as one-fourth to one-half the normal rate of Trigger release.

4) Hold Trigger to the rear, pull Charging Handle to the rear, and release pressure on the Trigger with a slow, smooth motion, without hesitations or stops until the Trigger is fully forward. An audible click should be heard- THE HAMMER SHOULD NOT FALL.

5) Repeat the *FIRE* position test five times. The Rifle must not malfunction during any of these five tests. If the Rifle malfunctions during any of these five tests, please contact STI INTERNATIONAL, INC.

Operation of Your Rifle

WARNING:
Please review all safe handling practices before continuing. Move Safety Selector to *SAFE*, open Bolt, & check Chamber before inserting Magazine into the Rifle.

Inserting a Magazine

Note: The Magazine may be inserted into the Rifle with Bolt Assembly open or closed.

1) Push Magazine up into Magazine Well until Magazine Catch engages and holds the Magazine in place. Tap upward on bottom of the Magazine to ensure proper seating.

Chambering a Round with Bolt Assembly Open

1) Depress upper portion of the Bolt Catch. Bolt should spring forward.

2) Tap the Forward Assist to ensure the Bolt is fully forward and locked.

Operation of Your Rifle

Chambering a Round with Bolt Assembly Closed

1) Pull Charging Handle fully to the rear.

2) Release the Charging Handle.

CAUTION:
Never push (or "ride" the Charging Handle- let it move forward on its own.

3) Tap the Forward Assist to ensure the Bolt is fully forward and locked (only if necessary).

Immediate Action in Case of Trouble

WARNING:
If your rifle stops firing with a live round in the chamber of a hot barrel (a misfire), remove the round fast. However, if you cannot remove it within 10 seconds, remove the magazine and wait 15 minutes with the rifle pointing in a safe direction. This way you won't get hurt by the possible round "cooking-off" (i.e. the round detonating just from the heat of the barrel). In any event, keep your face away from the ejection port while clearing a hot chamber.

1) Slap upward on Magazine to make sure it's seated properly.

Immediate Action in Case of Trouble

2) Pull Charging Handle all the way back. Observe ejection of case or cartridge. Check Chamber for obstructions.

WARNING:
Do NOT load with a hot chamber. A round may "Cook Off" (fire from the heat of the chamber)

3) If cartridge or case is ejected or Chamber is clear, release Charging Handle to feed a new round. Do NOT "ride" the Charging Handle forward.

4) Tap Forward Assist

5) Your Rifle is now ready to fire.

WARNING:
If a bullet is stuck in the barrel, do NOT try to remove it. Take the Rifle to a qualified gunsmith.

Disassembly View

Note:
This is not intended as an exhaustive list of all rifle parts.
STI does not recommend breaking down the rifle any further than shown except by a qualified gunsmith.